

## 1 ABSTRACT OF THE DISCLOSURE

A method for measuring electrical activity within a tubular region of or near the heart, such as the pulmonary vein, is provided. The method comprises inserting into the heart a distal end of a catheter comprising an elongated tubular catheter body having an outer wall, proximal and distal ends, and at least one lumen extending therethrough. The catheter further includes a mapping assembly comprising a tubular structure having a continuous generally circular main region generally transverse and distal to the catheter body and having an outer circumference. The tubular structure has at least one electrode carried by the generally circular main region of the mapping assembly. The outer circumference of the generally circular main region is contacted with the inner circumference of the tubular region. The electrical activity within the tubular region is mapped with the at least one electrode along the generally circular main region.

15

20

25

LES/les

30 RLM PAS543246.2-\* -12/30/03 7:24 PM